

ABSTRACT OF THE DISCLOSURE

VERY WIDE MEMORY TDM SWITCHING SYSTEM

A switching system. The system includes I input port mechanisms which receive packets from a communication line and have a width, where I is greater than or equal to 1 and is an integer. The system includes O output port mechanisms which send packets to a communication line and have a width, where O is greater than or equal to 1 and is an integer. The system includes a carrier mechanism along which packets travel. The carrier mechanism has a width wider than the width of the input and output port mechanisms. The carrier mechanism is connected to each input port mechanism and each output port mechanism. The system includes a memory mechanism in which packets are stored. The memory mechanism is connected to the carrier mechanism. The system includes a mechanism for providing packets to the memory mechanism through the carrier mechanism from the input port mechanisms. The providing mechanism is able to transfer packets or portions of packets whose total width equals the width of the carrier mechanism in each transfer cycle to the memory mechanism. A switching system for packets. A method for switching packets. The method includes the steps of receiving a first packet and at least a second packet at a switch mechanism. The method includes the steps of transferring data of the first packet and the second packet to a memory mechanism via time division multiplexing of a bus having a width so data from the

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packets fills a predetermined portion of the width of the bus. The bus width is not necessarily equal to the packet size.

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